

CARNEGIE INSTITUTION OF WASHINGTON  
DEPARTMENT OF GENETICS  
COLD SPRING HARBOR, LONG ISLAND, N. Y.

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Dear Lederberg,

The situation on K-12 is not very hopeful, since the patterns of resistance of the mutants are not very clear as yet. As you can imagine, in order to establish which combinations of resistance occur, and which do not, one must not only pick up a few mutants, but also test very large number of independent ones and test them with all phages. If one finds that a complex resistant phenotype occurs, one must not only make sure that the simple corresponding ones also occur, but that the former looks like the superposition of the latter. I doubt that we can go very far on this in the remaining two weeks of work here. What we can do, if you want to send your double mutants, is to make them resistant to one phage each, so that you may look for sensitives in your prototrophes. Reversion is likely to be rare enough not to complicate matters.

I would like to have your double mutants from B/r, both to study mutability rates, and also because Mark Adams would like to use them in phage growth experiments in order to see how suppression of growth factors affects phage growth. I shall appreciate your sending me a slant of each.

Best regards,

*S E Luria* -